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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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BLAU, SART UNIT
3711

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/248,515	SOSIN, HOWARD B.
	Examiner	Art Unit

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Office Action Summary

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 November 2000 .

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-19 and 21-28 is/are pending in the application.

4a) Of the above claim(s) 4, 11, 13, and 24 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-3, 5-10, 14-19, 21-23, and 25-28 is/are rejected.

7) Claim(s) 12 is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____
3. Copies of the certified copies of the priority documents have been received in this N
application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e)

Attachment(s)

15) Notice of References Cited (PTO-892) 18) Interview Summary (PTO-413) Paper No(s). _____
16) Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) Notice of Informal Patent Application (PTO-152)
17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 20) Other: _____

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DETAILED ACTION

Election/Restriction

1. Claim 24 is withdrawn from consideration due to matter being directed to a non-elected species (Group II, Species 3).

Claim Rejections - 35 USC § 112

2. The changes to the claims and arguments are agreed with and the rejections under 35 U.S.C. 112, second paragraph, are removed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muldoon in view of Hoeflich and Lynch.

Muldoon discloses a method of constructing a golf club for a golfer comprising the steps of determining a design loft of a club (in the form of determining a loft a conventional way, i.e. not taking into account differences in a golfer's grip and stance) (Col. 1, Lns. 44-59)), determining a lie of a club in the form of having to adjust it (Col. 4, Lns. 21-32), determining a swing characteristic (in the form of a golfer's grip and stance) and using a swing characteristics to determine a personalized loft angle and as such an effective loft for a golf will have a predetermined relationship to a design loft since a club will begin with a specific design loft and the head will be modified to fit a specific golfer's grip and stance to achieve that desired design loft (Col. 1, Lns. 44-59), constructing a club having a determined design loft in the form of the shaft being manipulated in relation to a head (Col. 3, Lns. 3-6), and constructing irons and woods (Col. 3, Lns. 10-16).

Muldoon lacks a step of determining a length, an offset and a lean angle. Hoeflich discloses irons having lengths (Table B-2) and offsets (Table B-1). In view of the patent of Hoeflich it would have been obvious to modify the method of constructing a club of Muldoon to have a step of determining a length and an offset of a club prior to manipulating a shaft in relationship to a head since the length and the offset will effect a player's grip and stance.

Lynch discloses golfer's with different lean angles in the form of positioning a golfer's hands when striking a ball in front or behind the ball (Col. 1, Lns. 49-68). In view of the patent of

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Lynch it would be obvious to modify the method of constructing a club of Muldoon to include a step of determining a lean angle in order to include the golfer's desired hand position with respect to a ball when manipulating a shaft in relation to a head to obtain a personalized loft.

5. Claims 2-3, 9-10, 14-16, 21-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muldoon in view of Hoeflich and Lynch as applied to claim 1 above, and further in view of Hansen.

Muldoon discloses a swing characteristic of an effective loft in the form of different golfers using the same club may achieve different lofts based upon a golfer's grip and stance (Col. 1, Lns. 44-59). Muldoon does not disclose a tailored club with a difference between a design loft and an effective loft but clearly a golfer will grip, stand and swing a club such that a suitable difference will be required in which having a design and effective loft being zero, and having a lean angle greater than 3 and less than 10 degrees are included.

Muldoon lacks a step of determining a lean angle based upon a length, a plurality of clubs, correlating a location of a ball in a stance of a golfer across a plurality of clubs, having a design and effective loft difference being zero for each club in a set, a lean angle greater than 3 and less than 10 degrees, and a lean angle increasing with club length. Hansen discloses the practice of positioning a ball progressively rearwardly from a front of a golfer's stance as a golfer progresses from drivers to short irons (Col. 1, Lns. 39-61). Clearly the majority of sets of clubs have a length of a club progressively decreasing from a driver to a short iron. In view of the patent of

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Hansel it would have been obvious to modify the method of designing a golf club of Muldoon to include a step of selecting a length of a club in determining a lean angle in order to accommodate a golfer who has a practice of positioning a ball progressively rearwardly from a front of a stance when progressing from drivers to short irons with a grip location staying constant and still achieve the desired loft for a particular club. As such the lean angle will increase with club length. In view of the patent of Hansel it would have been obvious to modify the method of constructing a golf club of Muldoon to include a step of correlating a location of a ball in a stance of a golfer across a plurality of clubs in determining a lean angle in order to accommodate a golfer who has a set of clubs with different lengths from a driver to a short iron and positions a ball at different locations with respect to a stance and a grip location constant for a golfer who still desires to achieve the desired loft for a particular club. In addition, it would have been obvious to modify the method of Muldoon to include a plurality of clubs in order to meet the particular habits of an individual golfer for each club in a set of clubs.

It would have been obvious to modify the method of constructing a plurality of clubs of Muldoon to have a design and effective loft difference being zero in order to accommodate a golfer who positions his grip such that the shaft of a club is in the vertical with respect to a vertical plane in the direction of intended ball flight. Finally it would have been obvious to modify the method of constructing clubs to have a lean angle greater than 3 and less than 10 degrees in order to make an effective loft the desired loft for a golfer who tends to hold his grip forward of the ball position at impact.

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6. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muldoon in view of Hoeflich, Lynch, and Hansen as applied to claims 2-3, 9-10, 14-16, 21-23 and 25 above, and further in view of Schmoll.

Muldoon discloses determining an effective loft based upon a trajectory of a ball struck in the form of a golfer achieving a certain degree of loft when using a specific club (Col. 1, Lns. 51-59).

Muldoon lacks using an automated observing system, an image forming device, and slow motion capability. Schmoll discloses using an automated observing system (Col. 3, Lns. 33-66), an image forming device, and slow motion capability (Col. 4, Lns. 57-67) in form of a digital camera used to determine lie at impact which is then used in determining modifications made to a club during a tailoring process (Col. 5, Lns. 25-45) in order to have accuracy (Col. 2, Lns. 35-42). In view of the patent of Schmoll it would have been obvious to modify the method of constructing a club to include using an automated observing system, an image forming device, and slow motion capability of a digital camera to determine effective loft in order to ensure accuracy for the fitting process in adjusting the loft angle and lean angle.

7. Claims 17-19 stand rejected and claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muldoon in view of Hansen.

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Muldoon discloses a swing characteristic of an effective loft in the form of different golfers using the same club may achieve different lofts based upon a golfer's grip and stance (Col. 1, Lns. 44-59). Muldoon does not disclose a designed club with a difference between a design loft and an effective loft but clearly a golfer will grip, stand and swing a club such that a suitable difference will be required in which having a design and effective loft being zero, and having a lean angle greater than 3 and less than 10 degrees are included.

Muldoon lacks a step of selecting a length, determining a lean angle based upon a length, and a plurality of clubs. Hansen discloses the practice of positioning a ball progressively rearwardly from a front of a golfer's stance as a golfer progresses from drivers to short irons (Col. 1, Lns. 39-61). Clearly the majority of sets of clubs have a length of a club progressively decreasing from a driver to a short iron. In view of the patent of Hansel it would have been obvious to modify the method of designing a golf club of Muldoon to include a step of selecting a length of a club in determining a lean angle in order to accommodate a golfer who has a practice of positioning a ball progressively rearwardly from a front of a stance when progressing from drivers to short irons with a grip location staying constant and still achieve the desired loft for a particular club. As such the lean angle would increase with club length. In addition, in view of the patent of Hansen it would have been obvious to modify the method of Muldoon to include a plurality of clubs in order to meet the particular habits of an individual golfer for each club in a set of clubs.

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It would have been obvious to modify the method of designing clubs to have a lean angle greater than 3 and less than 10 degrees in order to make an effective loft the desired loft for a golfer who tends to hold his grip forward of the ball position at impact.

8. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duclos in view of Lynch.

Duclos discloses a club having a head, a sole, a face, a predetermined design loft, and a shaft connected to a head via a hosel and adjusting the loft and lie of a club assuming the stance of a golfer is correct (Col. 3, Lns. 22-58).

Duclos lacks a club having a lean angle being at least 3 degrees to 10 degrees. Lynch discloses golfer's with different lean angles in the form of positioning a golfer's hands when striking a ball in front or behind the ball (Col. 1, Lns. 49-68). Lynch does not specifically state the amount of lean angle with vertical which a golfer will have to position the hands in front or behind a ball but clearly an artisan skilled in the art of fitting a club to a golfer to fit a golfer's specific stance and swing would have selected a suitable lean angle in which a lean angle being at least 3 degrees to 10 degrees is included. In view of the patent of Lynch it would be obvious to modify the club of Dulcos to include a lean angle being at least 3 degrees to 10 degrees in order to fit a golfer with a club having a correct loft taking into account a golfer's hand position with respect to being in front or behind a ball when addressing and impacting a ball.

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Allowable Subject Matter

9. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art discloses or renders as obvious a method of constructing a plurality of clubs determining a lean angle based on locating a ball progressively backward in a golfer's stance, away from the target, for increasingly longer clubs.

Response to Arguments

10. With respect to claims 1-3, 5-10, 14-16 the argument that have been considered but are moot in view of the new ground(s) of rejection.

11. With respect to claims 17-19 the argument that Muldoon does not separately teach design loft and lean angle to achieve a desired effective loft is disagreed with. Muldoon discusses a grip and a stance of a golfer which would include a lead angle, a specific type of club (i.e. six iron) which takes into account a design loft, and then personalizing a loft which is the effective loft of a club. The argument that none of the art specifically states varying a lean angle with club length is agreed with however there is motivation to do so which is to allow a golfer to maintain the same grip and stance for every club in a set. With respect to claim 12, the argument that Douglass does

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not disclose positioning a ball rearwardly as club length increases is agreed with and the rejection is removed.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

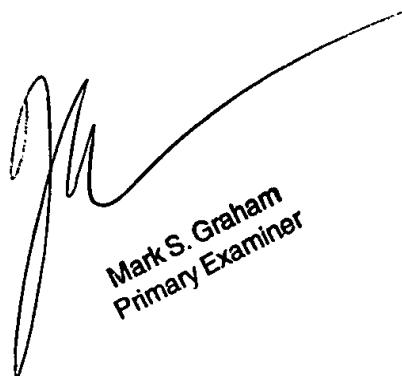
Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. D'Amico discloses a golfer with a lead angle (Fig. 1B) and placing a ball forwardly for longer length clubs (Col. 2, Lns. 34-44).

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Jeanette Chapman whose telephone number is (703) 308-1310. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.

slb/16 February 2001



Mark S. Graham
Primary Examiner